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# Analyzing the Impact of Service Quality Dimensions on Overall Service Quality in the Indian Automotive Industry: A Regression Analysis

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ARTICLE INFO	ABSTRACT
<p><b>Received:</b> 02-11-2022</p> <p><b>Received in revised form:</b> 05-12-2022</p> <p><b>Accepted:</b> 07-12-2022</p> <p><b>Available online:</b> 30-12-2022</p>	<p>In the Indian automobile industry, the relationship between the dimensions of Service Quality (SQ) and Overall Service Quality (OSQ) was the focus of this study. Regression analysis was used to determine the influence of SQ dimensions on overall service quality using a sample size of 100 customers. The findings showed a substantial correlation between individual service quality dimensions and total SQ, suggesting that the Indian automobile industry could benefit from improvements in particular SQ dimensions. These findings have significant ramifications for practitioners and decision-makers looking to boost customer happiness and SQ in the fiercely competitive Indian auto industry.</p>
<p><b>Keywords:</b></p> <p>Indian Automobile Sector; Service Quality; Dimensions of SQ; SERVQUAL; Overall Service Quality</p>	

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## 1.0 INTRODUCTION

Customer happiness is essential to assuring corporate success in India's fiercely competitive automobile industry. A key factor in customer satisfaction is service quality, which is the performance and dependability of the services offered by automakers to their customer. Customer happiness is essential to assuring corporate success in India's fiercely competitive automobile industry. A key factor in customer satisfaction is service quality, which is the performance and dependability of the services offered by automakers to their customer.

To stay competitive in the market, Indian automakers have recently concentrated on raising the quality of their services. Due to rising disposable incomes, a rise in the demand for personal

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mobility, and the introduction of new vehicle segments, the Indian automotive sector has been experiencing tremendous expansion. Indian automakers have been investing in modernising their service infrastructure, educating their workforce to provide high-quality services, and developing customer-centric service practises in order to preserve their place in the market. Improved consumer satisfaction and brand loyalty are the results of these efforts.

The use of technology-enabled services, such as online service booking, electronic payment methods, and real-time service progress tracking, has also improved clients' overall perceptions of service quality. The Indian automobile industry still faces issues, such as a shortage of competent labor, subpar service standards in smaller towns and rural areas, and insufficient infrastructure for service delivery. To further raise the calibre of their services, Indian automakers must solve these problems.

### 1.1 Objective of the Study

The purpose of the paper is to shed light on the variables that have an impact on the dependent variable and to comprehend the type and degree of the independent variables' influence on the dependent variable.

### 1.2 Review of Literature

SQ has emerged as a crucial component for the survival and development of firms in the fiercely competitive automobile sector. (Cheng *et al.*, 2006). Due to rising customer expectations and demands, the Indian automotive industry has recently placed a greater emphasis on service quality. (Sharma and Singh, 2015). Numerous aspects of SQ have been identified by studies, including dependability, responsiveness, certainty, empathy, and tangibles (Parasuraman *et al.*, 1988). SQ has been measured and evaluated using these criteria in a variety of contexts, including the automotive sector.

The effect of SQ dimensions on OSQ and customer satisfaction in the automotive industry has been studied in the past. (*e.g.*, Bao and Wang, 2016; Yoon and Kim, 2018). In the Chinese automotive business, reliability, responsiveness, assurance, empathy, and tangibles were found to have a substantial impact on customer satisfaction, according to Bao and Wang (2016). Similar to this, Yoon and Kim (2018) determined that the most important determinants of consumer satisfaction in the Korean automobile industry were dependability, responsiveness, and tangibles.

The relationship between SQ dimensions and total service quality in the Indian car industry hasn't been thoroughly studied, nevertheless. By conducting a regression analysis to determine the impact of SQ dimensions on OSQ in the Indian automotive industry, this study seeks to close this gap.

## 2.0 METHODOLOGY

The research paper is based on a quantitative research design, with standardised questionnaire used to gather data. A convenience selection method is utilised to choose 100 Audi users from Coimbatore, Tamil Nadu, who have recently used the company's services. To gather information on the five dimensions of SQ as well as total SQ, a questionnaire has been created based on the SERVQUAL scale created by Parasuraman *et al.*, (1988). SPSS is used to analyse the data that was gathered. To determine how different service quality parameters affect total service quality, regression analysis is employed.

### 3.0 RESULTS AND DISCUSSION

Table 1 - Demographic Profile

	Characteristics	%
Age	20-25 years	14
	Between 26 and 40 years	46
	Above 40 years	40
Gender	Male	91
	Female	09
Nature of Employment	Own Business	92
	Salaried	08
Family Monthly Income	₹5,00,000 to ₹10,00,000	11
	₹10,00,001 to ₹15,00,000	24
	₹15,00,001 to ₹20,00,000	19
	Above ₹20,00,001	46
Education Level	Educated	98
	Uneducated	02

The group is mostly composed of individuals between the ages of 26 and 40 (46%), followed by those above 40 (40%), and those between 20 and 25 years old (14%). The majority of the group is male (91%), while a small percentage are female (9%). The majority of the group are self-employed (92%), while a small percentage are salaried (8%). The largest portion of the group (46%) has a monthly family income above ₹20,00,000, followed by those with an income between ₹10,00,001 and ₹15,00,000 (24%), those between ₹15,00,001 and ₹20,00,000 (19%), and those between ₹5,00,000 and ₹10,00,000 (11%). The vast majority of the group is educated (98%), while a small percentage is uneducated (2%).

### 3.1 Multiple Regression Analysis

- *Null Hypothesis:* There is no significant linear relationship between dimensions of SQ and OSQ.

#### 3.1.1 Summary of Regression analysis

1	Dependent Variable	: Overall Service Quality (OSQ)
2	Independent Variable	: Reliability (X <sub>1</sub> ) Responsiveness (X <sub>2</sub> ) Assurance (X <sub>3</sub> ) Empathy (X <sub>4</sub> ) Tangibles (X <sub>5</sub> )
3	Multiple R Square Value	: 0.44
4	R Square Value	: 0.41
5	Standard Error	: 0.14
6	F Value	: 15.20
7	P Value	: 0.000

Based on this ANOVA table, the regression model is statistically significant (F-value = 15.2, p-value = 0.00), indicating that the independent variables collectively have a significant impact on overall service quality.

Based on the coefficients in the model summary table, the regression equation is:

$$Y = 2.75 + 0.50X_1 + 0.25X_2 + 0.40X_3 + 0.30X_4 + 0.20X_5$$

This equation indicates that the intercept (constant term) is 2.75, and for each one-unit increase in reliability, OSQ is predicted to increase by 0.50. Similarly, for each one-unit increase in responsiveness, reliability, assurance, empathy, and tangibles, OSQ is predicted to increase by 0.25, 0.40, 0.30, and 0.20, respectively, holding all other IV constant.

#### 4.0 CONCLUSION

The paper's conclusion is that the five SQ dimensions have a considerable impact on OSQ in the Indian auto industry, particularly in the case of selected Audi vehicle buyers of Coimbatore. According to the study's findings, customers' opinions of these SQ qualities play a role in how satisfied they are with Audi of India's services overall.

These findings imply that Audi and other automakers doing business in India should work on raising their SQ dimensions in order to promote customer happiness and loyalty. Increasing SQ dimensions could give automakers a competitive advantage in the Indian market. Future research should examine how these SQ factors affect outcomes like as consumer loyalty, repurchase intention, and word-of-mouth marketing, according to the report.

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